IN THE CLAIMS:

1. (Original) A method, comprising:

a) providing

i) a sample comprising a plurality of polypeptides;

ii) a first separation device configured for separation of said polypeptides in said sample based on charge;

iii) a second separation device configure for separation of said polypeptides is said sample based on hydrophobicity; and

iv) a third separation device configured for separation of said polypeptides in said sample based on size; and

b) separating said sample with said first separation device to generate a charge separated protein sample, wherein said charge separated sample comprises a plurality of fractions;

c) separating said charge separated sample with said second separation device to generate a charge and hydrophobicity separated sample, wherein said charge and hydrophobicity separated sample comprises a plurality of fractions; and

d) separating said charge and hydrophobicity separated sample with said third separation device to generate a charge, hydrophobicity, and size separated sample, wherein said charge, hydrophobicity and size separated sample comprises a plurality of fractions.

2. (Original) The method of claim 1, wherein said first separation device is configured for performing a separation technique selected from the group consisting of isoelectric focusing gel electrophoresis, free-flow electrophoresis, rotofor electrophoresis and ion exchange chromatography.

3. (Original) The method of claim 1, wherein said second separation device is configured for performing a separation technique selected from the group consisting of reversed-phase chromatography and hydrophobic interaction chromatography.

4. (Original) The method of claim 1, wherein said third separation device is configured for performing a separation technique selected from the group consisting of SDS-gel electrophoresis, size exclusion chromatography, and capillary electrophoresis.

5. (Original) The method of claim 1, further comprising the step of detecting polypeptides in said fractions of said charge, hydrophobicity, and size separated sample.

6. (Original) The method of claim 5, wherein said detecting comprises a detection method selected from the group consisting of UV/VS spectrophotometry, fluorescence spectrophotometry, and mass spectrometry.

7. (Original) The method of claim 6, wherein said mass spectroscopy is selected from the group consisting of MALDI-TOF-MS, ESI oa TOF, ion trap mass spectrometry, ion trap/time-of-flight mass spectrometry; quadrupole mass spectrometry, triple quadrupole mass spectrometry, Fourier Transform (ICR) mass spectrometry, and magnetic sector mass spectrometry.

8. (Original) The method of claim 1, further comprising the step of attaching said plurality of fractions of said charge, hydrophobicity, and size separated sample to a solid support.

9. (Original) The method of claim 8, wherein said plurality of fractions are arrayed on said solid support.

10. (Original) The method of claim 9, further comprising the step of performing a functional assay on said arrayed plurality of fractions.

11. (Original) The method of claim 10, wherein said functional assay comprises an antibody binding assay.

12. (Original) The method of claim 1, wherein said plurality of polypeptide comprise a proteome.

13. (Original) The method of claim 1, further providing a second sample comprising a plurality of polypeptides.

14. (Original) The method of claim 13, wherein said sample comprises a proteome of a non-cancerous cell and said second sample comprises a proteome of a cancerous cell.

15. (Original) The method of claim 14, further comprising the step of comparing said charge, hydrophobicity, and size separated sample to a charge, hydrophobicity, and size separated second sample.

16-33. (Canceled)